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## Notes on the Flora of Middle Georgia

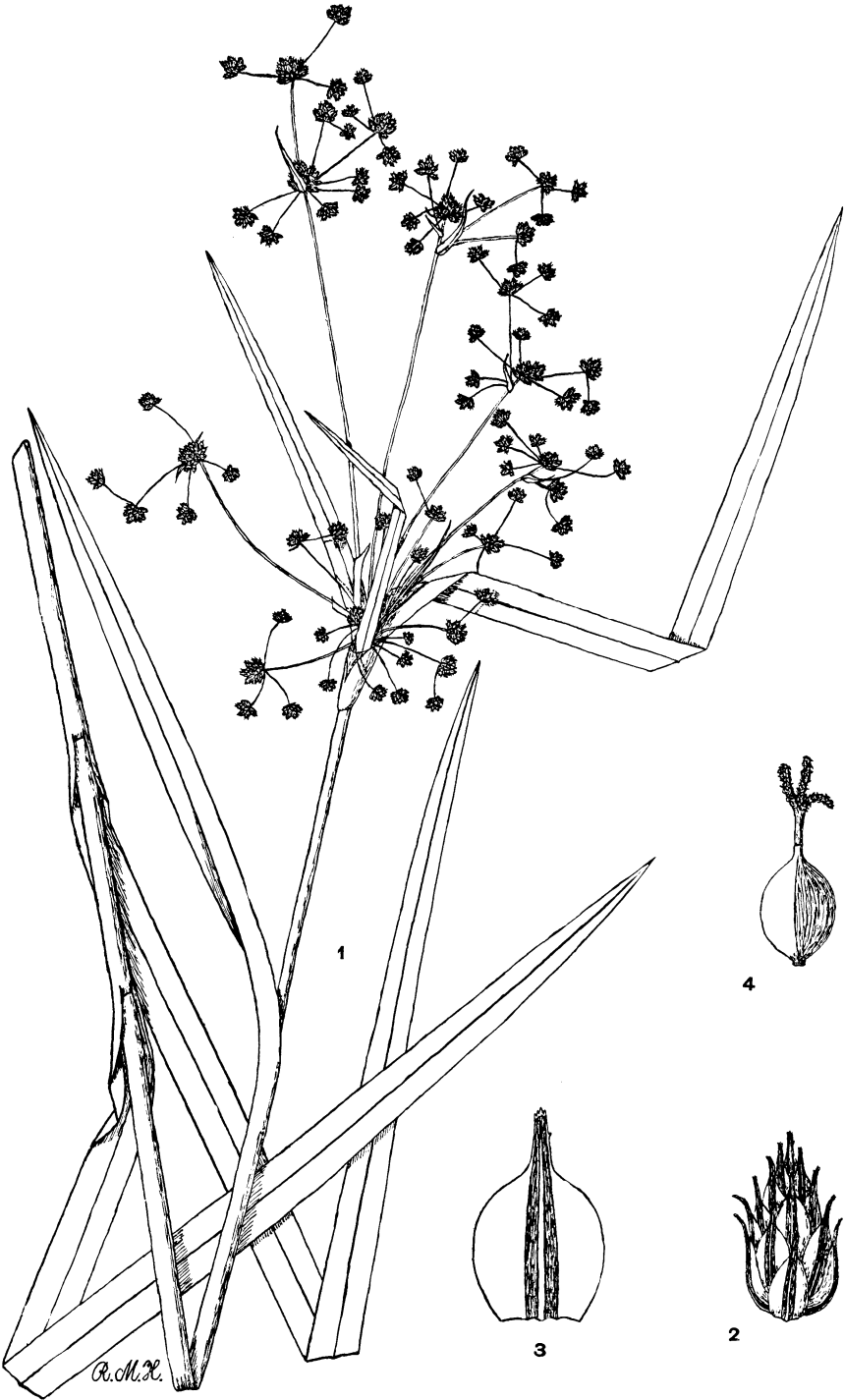
BY ROLAND M. HARPER

(WITH PLATE 22)

During part of three years spent at the University of Georgia, which is located in Athens, I had opportunity to make a somewhat extensive study of the interesting flora of that vicinity; and in the following notes I have brought together briefly some of the results of my observations on this flora. Although there have been other local botanists in Athens for many years, apparently no observations made since Elliott's time on this immediate region have been mentioned in botanical literature. In Elliott's *Botany of South Carolina and Georgia* (1816-1821) many plants, some of them types, are mentioned as having been collected in or near Athens by a Mr. Green, and I have been enabled to verify a number of Mr. Green's stations which had been overlooked by later authors after a lapse of nearly eighty years.

Athens, the county-seat of Clarke County, is situated in that section of the state known as Middle Georgia, a region well defined geologically from the two newer sections, north and south Georgia. Middle Georgia occupies about one third of the area of the state, and is distinguished by its geological formation being wholly Archaean or metamorphic. My botanical explorations of this region, in the spring and fall of 1895 and 1896, and the spring of 1897, were confined mainly to the western half of Clarke County, and portions of the neighboring counties of Jackson, Oconee, Walton and Morgan. This territory which I explored lies in the lower foothills of the Blue Ridge, being entirely south of latitude  $34^{\circ}$ N., and east of longitude  $83^{\circ} 31'$ W., and ranging from 500 to 800 feet above sea-level.

Taking Clarke County as typical of the surrounding region, its characteristic features of soil, topography, etc., may be briefly described. The predominating soil consists largely of red clay, derived from the disintegration of the granitic rocks which underlie the surface everywhere in this region and outcrop in many places,



SCIRPUS GEORGIANUS

especially in the valleys. With the clay are mixed sand, organic matter, and numerous other constituents in proportions varying according to the local conditions.

Topographically, the country is quite hilly. The two branches of the Oconee River, known respectively as the Oconee and Middle Oconee, which traverse Clarke County from north to south, are joined by countless smaller creeks and "branches," and all these streams flow in rather deep and narrow valleys between broad rounded ridges.

The average annual temperature of Athens, which corresponds very closely with the average for middle Georgia, is about 63°F., with the following averages for the four seasons: spring, 62°; summer, 80°; autumn, 64°; winter, 46°. The average annual rainfall is about 55 inches, distributed among the seasons as follows: spring, 14 inches; summer, 13 inches; autumn, 10 inches; winter, 18 inches.

It has been estimated that about one-half the area of Clarke County is covered with forest, of which one-fifth is original and four-fifths second growth. The adjoining counties, which are not so thickly populated, would no doubt show a larger proportion of forest. The original forest is now mostly confined to the steep sides of the valleys, while the second-growth is found on the more level land along the ridge-tops.

The flora of this region is quite similar in general character to that of the whole belt of country lying at the same elevation along the eastern slope of the Appalachian range from New England to Alabama. A comparison of the flora of Middle Georgia with that of southern New England shows that at least half of the species of each region are common to both. There is less similarity between the flora of Middle Georgia and that of South Georgia, which, although much nearer, belongs to an entirely different floral province.

In the cool shady primeval forests on the northern slopes of the ridges in Clarke and adjoining counties are found many species which are supposed to be strictly Alleghanian in distribution, some of which are mentioned below. On the other hand, the number of species which reach their northern limits in this region is very small. Of the species which I have collected in Middle Georgia,

about 95% are known from the region of the northern manuals, and the remaining 5% are mostly either recently described or recently introduced, or species of very restricted range.

A little study of the plants of the region under consideration shows that they may be divided according to habitat into seven or eight well-marked principal groups. These groups overlap each other somewhat, but not as much as might be expected. In the following lists of plants I have prefixed an asterisk to those species which are mentioned in more than one list, to give some idea of the extent of overlapping.

Taking up the various floral areas in the order of their humidity, the swamps, bogs, meadows and marshes may be considered first. In the region about Athens these are of very small extent, owing chiefly to the narrowness and steepness of the valleys, and the number of hydrophytic species is correspondingly small. The following have been observed mostly in the meadows along Tanyard Branch in Athens and in the Sandy Creek marsh just north of the city:

- |   |  |
|---|--|
| * <i>Selaginella apus</i> (L.) Spring.          | <i>dichotomus</i> Ell.                     |
| <i>Typha latifolia</i> L.                       | <i>acuminatus</i> Mx.                      |
| <i>Sparganium androcladum</i> (Engelm.) Morong. | <i>Polygonum sagittatum</i> L.             |
| <i>Potamogeton diversifolius</i> Raf.           | <i>Nymphaea advena</i> Soland.             |
| <i>Alisma Plantago-aquatica</i> L.              | <i>Ranunculus pusillus</i> Poir.           |
| <i>Sagittaria latifolia</i> Willd.              | <i>Agrimonia parviflora</i> Soland.        |
| <i>Paspalum laeve</i> Mx.                       | <i>Callitriche palustris</i> L.            |
| <i>Homalocenchrus oryzoides</i> (L.) Poll.      | <i>Viola cucullata</i> Ait.                |
| <i>Eragrostis hypnoides</i> (Lam.) B. S.P.      | <i>Ludwigia alternifolia</i> L.            |
| <i>Cyperus flavescens</i> L.                    | <i>Isnardia palustris</i> L.               |
| <i>strigosus</i> L.                             | <i>Lysimachia Nummularia</i> L.            |
| <i>Kyllingia pumila</i> Mx.                     | <i>Hydrolea quadrivalvis</i> Walt.         |
| <i>Eleocharis obtusa</i> (Willd.) Schult.       | <i>Lycopus Virginicus</i> L.               |
| <i>tenuis</i> (Willd.) Schult.                  | <i>Mimulus ringens</i> L.                  |
| <i>acicularis</i> (L.) R. & S.                  | <i>Gratiola sphaerocarpa</i> Ell.          |
| <i>Scirpus lacustris</i> L.                     | * <i>Ilysanthes refracta</i> (Ell.) Benth. |
| <i>Carex lurida</i> Wahl.                       | <i>Veronica serpyllifolia</i> L.           |
| <i>vulpinoidea</i> Mx.                          | <i>Galium trifidum</i> L.                  |
| * <i>Peltandra Virginica</i> (L.) Kunth.        | <i>Vernonia noveboracensis</i> (L.) Willd. |
| <i>Juncus effusus</i> L.                        | * <i>Mikania scandens</i> (L.) Willd.      |
|   | <i>Eclipta alba</i> (L.) Hassk.            |
|   | <i>Adopogon Dandelion</i> (L.) Kuntze.     |

*Eleocharis acicularis* and *Scirpus lacustris* do not seem to have been reported from Georgia, at least within recent years, and they are probably rather rare in the state. I collected both in a small bog near the Middle Oconee River in Clarke County on May 28, 1897. The latter is mentioned in Dr. Feay's "Catalogue of Phaenogamous Plants growing spontaneously within thirty miles of Savannah, Ga." (Atlanta Med. Jour., 3: 167-217. 1860), but might have been collected in South Carolina.

Certain species, particularly trees and shrubs, seem to flourish best on river banks, and are rarely or never found in other situations. The following is a partial list of such species :

* <i>Uniola latifolia</i> Mx.	<i>Pyrus angustifolia</i> Ait.
* <i>Danthonia sericea</i> Nutt.	<i>Amelanchier Canadensis</i> (L.)
<i>Arundinaria tecta</i> (Walt.) Muhl.	Medic.
* <i>Uvularia sessilifolia</i> L.	<i>Asimina triloba</i> (L.) Dunal.
<i>Allium mutabile</i> Mx.	<i>Ptelea trifoliata</i> L.
* <i>Smilax rotundifolia</i> L.	* <i>Acer rubrum</i> L.
<i>Salix nigra</i> Marsh.	<i>Negundo</i> L.
<i>Carpinus Caroliniana</i> Walt.	<i>Tilia pubescens</i> Ait.
<i>Ostrya Virginiana</i> (Mill.) Willd.	<i>Cornus Amonum</i> Mill.
<i>Betula nigra</i> L.	* <i>Azalea nudiflora</i> L.
* <i>Alnus rugosa</i> (DuRoi) Koch.	<i>Kalmia latifolia</i> L.
<i>Fagus Americana</i> Sweet.	<i>Leucothoë Catesbei</i> (Walt.) Gray.
<i>Quercus nigra</i> L. ( <i>Q. aquatica</i>	<i>Vaccinium arboreum</i> Marsh.
Walt.).	<i>Symplocos tinctoria</i> (L.) L'Her.
<i>Ulmus Americana</i> L.	<i>Mohrodendron Carolinum</i> (L.)
<i>Morus rubra</i> L.	Britton.
* <i>Liriodendron Tulipifera</i> L.	<i>Styrax Americana</i> Lam.
* <i>Ranunculus recurvatus</i> Poir.	<i>Fraxinus Americana</i> L.
<i>Thalictrum polygamum</i> Muhl.	<i>Chionanthus Virginica</i> L.
<i>Podophyllum peltatum</i> L.	<i>Ipomoea lacunosa</i> L.
<i>Calycanthus floridus</i> L.	* <i>Bignonia capreolata</i> L.
<i>Arabis Canadensis</i> L.	<i>Catalpa bignonioides</i> Walt.
<i>Platanus occidentalis</i> L.	<i>Cephalanthus occidentalis</i> L.
<i>Philadelphus grandiflorus</i> Willd.	<i>Lonicera sempervirens</i> L.
<i>Porteranthus trifolius</i> (L.)	<i>Actinomeris alternifolia</i> (L.) DC.
Britton.	

I have found the *Arundinaria* in fruit but once, on May 4, 1897, at Tallasee Shoals on the Middle Oconee River.

In the wet woods, which have some species in common with

the river banks on one hand and the rich woods on the other, I have collected the following plants of interest :

- |   |   |
|---|---|
| <i>Botrychium obliquum</i> Muhl.                | <i>Lindera Benzoin</i> (L.) Blume.      |
| <i>Woodwardia areolata</i> (L.) Moore.          | <i>Penthorum sedoides</i> L.            |
| <i>Asplenium Filix-foemina</i> (L.) Bernh.      | <i>Tiarella cordifolia</i> L.           |
| <i>Onoclea sensibilis</i> L.                    | <i>Parnassia asarifolia</i> Vent.       |
| <i>Osmunda regalis</i> L.                       | <i>Decumaria Barbara</i> L.             |
| <i>cinnamomea</i> L.                            | <i>Itea Virginica</i> L.                |
| * <i>Selaginella apus</i> (L.) Spring.          | * <i>Acer rubrum</i> L.                 |
| <i>Carex intumescens</i> Rudge.                 | <i>Falcata comosa</i> (L.) Kuntze.      |
| <i>crinita</i> Lam.                             | <i>Phyllanthus Carolinensis</i> Walt.   |
| <i>tenuis</i> Rudge.                            | <i>Impatiens biflora</i> Walt.          |
| <i>leptalea</i> Wahl.                           | <i>Viola obliqua</i> Hall.              |
| <i>sterilis</i> Willd.                          | <i>primulaefolia</i> L.                 |
| * <i>Peltandra Virginica</i> (L.) Kunth.        | <i>Oxypolis rigidus</i> (L.) Britton.   |
| <i>Arisaema triphyllum</i> (L.) Torr.           | * <i>Azalea nudiflora</i> L.            |
| <i>Adicea pumila</i> (L.) Raf.                  | <i>Xolisma ligustrina</i> (L.) Britton. |
| <i>Boehmeria cylindrica</i> (L.) Willd.         | <i>Steironema ciliatum</i> (L.) Baudo.  |
| <i>Habenaria flava</i> (L.) Gray.               | <i>Gentiana Elliottii</i> Chapm.        |
| * <i>Alnus rugosa</i> (DuRoi) Koch.             | <i>Chelone glabra</i> L.                |
| * <i>Liriodendron Tulipifera</i> L.             | * <i>Mitchella repens</i> L.            |
| * <i>Xanthorrhiza apifolia</i> L'Her.           | <i>Sambucus Canadensis</i> L.           |
| * <i>Ranunculus recurvatus</i> Poir.            | <i>Mikania scandens</i> (L.) Willd.     |
| <i>Trautvetteria Carolinensis</i> (Walt.) Vail. | <i>Pluchea petiolata</i> Cass.          |

Of greatest interest perhaps are those species which inhabit the rich shady primeval forests on the north sides of hills. Among these may be mentioned the following :

- |   |  |
|---|--|
| <i>Botrychium Virginianum</i> (L.) Sw.          | <i>Uvularia perfoliata</i> L.              |
| <i>Adiantum pedatum</i> L.                      | <i>puberula</i> Mx.                        |
| <i>Asplenium platyneuron</i> (L.) Oakes.        | <i>Vagnera racemosa</i> (L.) Morong.       |
| <i>Polystichum acrostichoides</i> (Mx.) Schott. | <i>Polygonatum biflorum</i> (Walt.) Ell.   |
| <i>Poa brevifolia</i> Muhl.                     | <i>Medeola Virginiana</i> L.               |
| <i>Carex laxiflora</i> Lam.                     | <i>Trillium stylosum</i> Nutt.             |
| <i>Tradescantia montana</i> Shuttl.             | <i>Smilax ecirrhata</i> (Engelm.) Wats.    |
| <i>Juncoides campestre</i> (L.) Kuntze.         | <i>Dioscorea villosa</i> L.                |
| <i>pilosum</i> (L.) Kuntze.                     | <i>Tipularia unifolia</i> (Muhl.) B. S. P. |
| <i>Chamaelirium luteum</i> (L.) Gray.           | <i>Corylus rostrata</i> Ait.               |

<i>Castanea dentata</i> (Marsh.) Borkh.	<i>Waldsteinia parviflora</i> Small.
<i>Quercus rubra</i> L.	<i>Geranium maculatum</i> L.
<i>Pyrularia pubera</i> Mx.	<i>Acer leucoderme</i> Small.
<i>Silene stellata</i> (L.) Ait. f.	<i>Rhamnus Caroliniana</i> Walt.
<i>Alsine pubera</i> (Mx.) Britton.	<i>Viola palmata</i> L.
* <i>Liriodendron Tulipifera</i> L.	* <i>obliqua</i> Hill.
<i>Cimicifuga racemosa</i> (L.) Nutt.	<i>hastata</i> Mx.
* <i>Xanthorrhiza apiifolia</i> L'Her.	<i>tripartita</i> Ell.
<i>Anemone quinquefolia</i> L.	<i>Panax quinquefolium</i> L.
<i>Hepatica triloba</i> Chaix.	<i>Oxydendrum arboreum</i> (L.) DC.
<i>Syndesmon thalictroides</i> (L.) Hoffmg.	<i>Pedicularis Canadensis</i> L.
<i>Sanguinaria Canadensis</i> L.	<i>Thalesia uniflora</i> (L.) Britton.
<i>Dentaria laciniata</i> Muhl.	* <i>Mitchella repens</i> L.
<i>Heuchera Americana</i> L.	<i>Viburnum acerifolium</i> L.
<i>Hydrangea arborescens</i> L.	<i>Eupatorium aromaticum</i> L.
* <i>Hamamelis Virginiana</i> L.	<i>Solidago caesia</i> L.
	<i>Nabalus altissimus</i> (L.) Hook.

Several of the above species reach the southern limit of their ranges in this region. *Juncooides pilosum*, *Corylus rostrata*, *Pyrularia pubera*, *Silene stellata*, *Anemone quinquefolia*, *Hydrangea arborescens*, *Viola hastata*, and *Solidago caesia* have been collected by Dr. J. K. Small in the vicinity of Stone Mountain, a few miles farther south but at a higher altitude than my stations for the same species. A few others extend down along the foothills to about the same altitude in eastern Alabama. Some of those which seem to have never been collected farther south than I have found them will be mentioned more in detail at the end of this paper.

In the drier and more open woods, including those on the south sides of hills and the second-growth oak woods which are frequent on the broad summits of the ridges, the flora is quite different from that of the rich shady original woods, although it is in some places difficult to draw a sharp line between them, and a few species are common to both. The following are some of the characteristic species of dry woods:

<i>Panicum commutatum</i> Schult.	<i>Carex Pennsylvanica</i> Lam.
<i>Stipa avenacea</i> L.	<i>Tradescantia reflexa</i> Raf.
<i>Melica mutica</i> Walt.	<i>Juncus tenuis</i> Willd.
<i>Uniola latifolia</i> Mx.	* <i>Smilax rotundifolia</i> L.
<i>Danthonia sericea</i> Nutt.	<i>herbacea</i> L.



- Hypoxis erecta* L.  
*Sisyrinchium Carolinianum* Bicknell.  
*Juglans nigra* L.  
*Hicoria alba* (L.) Britton (*Carya tomentosa* Nutt.).  
*glabra* (Mill.) Britton (*C. porcina* Nutt.).  
*Castanea pumila* (L.) Mill.  
*Quercus digitata* (Marsh.) Sudw.  
*coccinea* Wang.  
*Marylandica* Muench.  
*alba* L.  
*minor* (Marsh.) Sargent.  
*Prinus* L.  
*Silene Virginica* L.  
*Asimina parviflora* (Mx.) Dunal.  
*\*Anemone Virginiana* L.  
*Ranunculus fascicularis* Muhl.  
*Crataegus spathulata* Mx.  
*Boyntoni* Beadle.  
*Prunus serotina* Ehrh.  
*umbellata* Ell.  
*Cercis Canadensis* L.  
*Baptisia bracteata* Ell.  
*\*Trifolium reflexum* L.  
*Psoralea pedunculata* (Mill.) Vail.  
*Stylosanthes riparia* Kearney.  
*Lespedeza hirta* (L.) Ell.  
*Vicia Hugerii* Small.  
*Linum Virginianum* L.  
*Jatropha stimulosa* Mx.  
*Rhus glabra* L.  
*Euonymus Americanus* L.  
*Aesculus octandra* Marsh.  
*Ceanothus Americanus* L.  
*Vitis aestivalis* Mx.  
*cordifolia* Mx.  
*rotundifolia* Mx.  
*Parthenocissus quinquefolia* (L.) Planch.  
*Viola pedata* L.  
*villosa* Walt.  
*multicaulis* (T. & G.) Britton.  
*Ligusticum Canadense* (L.) Britton.  
*Sanicula Canadensis* L.  
*Marylandica* L.  
*Zizia cordata* (Walt.) DC.  
*Cornus florida* L.  
*Chimaphila maculata* (L.) Pursh.  
*Vaccinium stamineum* L.  
*corymbosum* L.  
*Gelsemium sempervirens* (L.) Ait. f.  
*Gentiana villosa* L.  
*Amsonia Tabernaemontana* Walt.  
*Asclepias variegata* L.  
*Vincetoxicum hirsutum* (Mx.) Britton.  
*Convolvulus repens* L.  
*Phlox amoena* Sims.  
*Onosmodium Virginianum* (L.) A. DC.  
*Hedcoma pulegioides* (L.) Pers.  
*Calamintha Caroliniana* Sweet.  
*Salvia urticaefolia* L.  
*Blephilia ciliata* (L.) Raf.  
*Scutellaria integrifolia* L.  
*pilosa* Mx.  
*Trichostema dichotomum* L.  
*lineare* Nutt.  
*Dasystoma Virginica* (L.) Britton.  
*Gerardia tenuifolia* Vahl.  
*\*Bignonia capreolata* L.  
*Ruellia ciliosa* Pursh.  
*strepens* L.  
*Houstonia purpurea* L.  
*Viburnum rufotomentosum* Small.  
*Elephantopus Carolinianus* Willd.  
*Solidago brachyphylla* Chapm.  
*petiolaris* Ait.  
*erecta* Pursh.  
*Sericocarpus asteroides* (L.) B.S.P.  
*Aster patens* Ait.  
*Erigeron pulchellus* Mx.  
*annuus* (L.) Pers.  
*Antennaria plantaginica* (L.) R. Br.



<i>Silphium Asteriscus</i> L.	<i>Adopogon Carolinianum</i> (Walt.)
<i>Corcopsis grandiflora</i> Hogg.	Britton.
<i>Senecio Smallii</i> Britton.	

Many of the above species are more common southward and westward, and do not range much farther northeast than Athens.

At many points in the gray gravelly and sandy lands the underlying rock is hard enough to resist disintegration and becomes exposed on the surface. On these granite outcrops, and particularly around their edges, where there is apt to be more or less moisture, are found some rather interesting plants, among them being the following :

<i>Cheilanthes lanosa</i> (Mx.) Watt.	<i>Arabis Virginica</i> (L.) Trel.
<i>Woodsia obtusa</i> (Spreng.) Torr.	<i>Diamorpha pusilla</i> Nutt.
<i>Fimbristylis autumnalis</i> (L.) R. & S.	<i>Saxifraga Virginicensis</i> Mx.
<i>Carex cephalophora</i> Muhl.	<i>Trifolium Carolinianum</i> Mx.
<i>Juncus marginatus</i> Rostk.	<i>Oxalis violacea</i> L.
<i>Nothoscordum bivalve</i> (L.) Britton.	<i>Crotonopsis linearis</i> Mx.
<i>Agave Virginica</i> L.	<i>Sarothra gentianoides</i> L.
<i>Talinum teretifolium</i> Pursh.	* <i>Opuntia vulgaris</i> Mill.
<i>Cerastium brachypodum</i> (Engelm.) Robinson.	<i>Myosotis verna</i> Nutt.
<i>Arenaria brevifolia</i> Nutt.	* <i>Ilysanthes refracta</i> (Ell.) Benth.
	<i>Plantago elongata</i> Pursh.
	<i>Valerianella radiata</i> (L.) Dufr.

Still another peculiar flora is found in deposits of dry sand along the rivers at a few points. The species frequenting this sand are quite few, on account of the very small relative extent of these deposits. I have noticed the following psammophilous species along the two rivers in Clarke Co.:

<i>Pteris aquilina</i> L.	<i>Breweria humistrata</i> (Walt.)
* <i>Yucca filamentosa</i> L.	Gray.
<i>Lupinus perennis</i> L.	<i>Monarda punctata</i> L.
<i>Ascyrum hypericoides</i> L.	<i>Chrysopsis graminifolia</i> (Mx.)
* <i>Opuntia vulgaris</i> Mill.	Nutt.
* <i>Vaccinium arboreum</i> Marsh.	

I have found all of these, with the exception of *Lupinus*, much more abundant in south Georgia, where the soil is nearly all sand.

Lastly may be considered the plants of fields, roadsides and

pastures, including the native and introduced weeds. The following is a partial list of such species:

- |   |  |
|---|--|
| <i>Rumex crispus</i> L.                 | <i>Euphorbia maculata</i> L.             |
| <i>obtusifolius</i> L.                  | <i>Preslii</i> Guss.                     |
| <i>Acetosella</i> L.                    | <i>Modiola Caroliniana</i> (L.) Don.     |
| <i>Polygonum Convolvulus</i> L.         | <i>Oenothera laciniata</i> Hill.         |
| <i>Amarantus spinosus</i> L.            | <i>Hartmannia speciosa</i> (Nutt.)       |
| <i>retroflexus</i> L.                   | Small.                                   |
| <i>Phytolacca decandra</i> L.           | <i>Daucus Carota</i> L.                  |
| <i>Boerhaavia erecta</i> L.             | <i>Chaerophyllum Teinturierii</i> Hook.  |
| <i>Mollugo verticillata</i> L.          | <i>Anagallis arvensis</i> L.             |
| <i>Portulaca oleracea</i> L.            | <i>Heliotropium Indicum</i> L.           |
| <i>Agrostemma Githago</i> L.            | <i>Lithospermum arvense</i> L.           |
| <i>Alsine media</i> L.                  | <i>Verbena bracteosa</i> Mx.             |
| <i>Cerastium viscosum</i> L.            | <i>Lamium amplexicaule</i> L.            |
| <i>Anychia dichotoma</i> Mx.            | <i>Solanum nigrum</i> L.                 |
| <i>Ranunculus parviflorus</i> L.        | <i>Carolincense</i> L.                   |
| <i>abortivus</i> L.                     | <i>Datura Tatula</i> L.                  |
| <i>Lepidium Virginicum</i> L.           | <i>Verbascum Thapsus</i> L.              |
| <i>Coronopus didymus</i> (L.) J. E.     | <i>Blattaria</i> L.                      |
| Smith.                                  | <i>Veronica peregrina</i> L.             |
| <i>Sisymbrium officinale</i> (L.) Scop. | <i>arvensis</i> L.                       |
| <i>Cardamine hirsuta</i> L.             | <i>Plantago major</i> L.                 |
| <i>Capsella Bursa-pastoris</i> (L.)     | <i>lanceolata</i> L.                     |
| Medic.                                  | <i>aristata</i> Mx.                      |
| <i>Draba verna</i> L.                   | <i>heterophylla</i> Nutt.                |
| <i>Stenophragma Thaliana</i> (L.)       | <i>Houstonia coerulea</i> L.             |
| Celak.                                  | <i>Legouzia perfoliata</i> (L.) Britton. |
| <i>Rubus nigrobaccus</i> Bailey.        | <i>Solidago Canadensis</i> L.            |
| <i>Duchesnea Indica</i> (Andr.) Focke.  | <i>Erigeron Canadensis</i> L.            |
| <i>Alchemilla arvensis</i> (L.) Scop.   | <i>Filago nivea</i> Small.               |
| <i>Rosa rubiginosa</i> L.               | <i>Ambrosia artemisiifolia</i> L.        |
| <i>bracteata</i> Wendl.                 | <i>trifida</i> L.                        |
| <i>Medicago Arabica</i> (L.) All.       | <i>Xanthium strumarium</i> L.            |
| <i>Melilotus alba</i> Lam.              | <i>Bidens frondosa</i> L.                |
| <i>Trifolium procumbens</i> L.          | <i>bipinnata</i> L.                      |
| <i>Trifolium arvense</i> L.             | <i>Helenium tenuifolium</i> Nutt.        |
| <i>pratense</i> L.                      | <i>Achillea Millefolium</i> L.           |
| <i>repens</i> L.                        | <i>Anthemis Cotula</i> L.                |
| <i>Vicia hirsuta</i> (L.) Koch.         | <i>Chrysanthemum Leucanthemum</i>        |
| <i>sativa</i> L.                        | L.                                       |
| <i>Geranium Carolinianum</i> L.         | <i>Arctium Lappa</i> L.                  |
| <i>Oxalis stricta</i> L.                | <i>Carduus lanceolatus</i> L.            |
| <i>Melia Azederach</i> L.               | <i>Taraxacum officinale</i> Weber.       |
| <i>Acalypha ostryaefolia</i> Riddell.   |  |

I have not attempted to make all the above lists complete, and have purposely omitted from them several species which are rare or not characteristic of any of these areas. As my observations in this region have not extended over the summer months, I have doubtless omitted many species which are characteristic of the several areas, especially in the first group, that of hydrophytic plants.

In this connection it might be of interest to note what plants do not occur in middle Georgia. The genera *Lycopodium* and *Polygala*, for instance, which are represented by several species both in south Georgia and in the Northern States, seem to be wanting in middle Georgia. Some species of these two genera inhabit the northern forests, while others are found mostly near the coast, and the northern species do not seem to extend quite so far south, or the coast species so far inland, as middle Georgia. Also the genera *Xyris*, *Eriocaulon*, *Lilium*, *Iris*, *Limnophyton*, *Castalia*, *Sarracenia*, *Drosera*, *Triadenum*, *Proserpinaca*, *Myriophyllum*, *Bartonia*, *Limnanthemum* and *Utricularia*, which are represented north and south, seem to be rare or absent in middle Georgia. The same might be said also of many species of several other genera, such as *Rhynchospora*, *Ludwigia* and *Sabbatia*. The Orchidaceae, Hypericaceae and Asclepiadaceae are represented by fewer species in middle Georgia than in other parts of the country.

Below I append an annotated list of some of the more rare or noteworthy species of this region which have come under my observation. As no topographical map of the region of my explorations in middle Georgia has yet been made, the altitudes given below are only approximate, but it is believed that none of them are more than 50 feet in error.

POLYPODIUM VULGARE L. Sp. Pl. 1085. 1753

There is a station for this species on the south side of Bobbin Mill Creek, Clarke Co., where it grows on the brow of a high granite cliff and some adjacent smaller rocks, in company with its congener, *P. polypodioides*. The altitude is about 620 ft. This is probably the southern limit of *P. vulgare* in eastern North America.

POA BREVIFOLIA Muhl. Gram. 138. 1817

In rich woods along Bobbin Mill Creek, flowering in March.

Altitude 610 feet. This species does not seem to have been reported from as far south as Georgia before.

***Scirpus Georgianus* sp. nov. (Plate 22)**

Culm erect, about 5 dm. tall, terete or nearly so, 3-4-leaved. Leaves smooth, the lower ones about 2 dm. long and 1 cm. wide; sheaths green; involucre leaves about 3, the longest exceeding the umbel; umbel thrice compound, many-rayed, the longest rays about 1 dm. long, rather stiff and ascending, the shorter and secondary rays most spreading at right angles; spikelets green, about 3 mm. long, 10-15-flowered, in glomerules of 5-10; scales orbicular-ovate, about 1.5 mm. long, with somewhat loosely-spreading awns; margins thin and membranous, colorless or slightly tinged with brown; midrib green, with a narrow whitish keel, prolonged into an awn about half as long as the body of the scale with 3 or 4 short scarios teeth at its apex, giving the whole spikelet a characteristic striate and bristly appearance: stamens 3: style 3-cleft: achene oblong, about 0.8 mm. long, short-beaked, compressed-triangular: bristles none.

A unique species, allied to *S. atrovirens* and *S. polyphyllus* (neither of which is known in middle Georgia), but differing from both in its greener spikes, peculiar scales, and absence of bristles. Another distinguishing character is found in the sheaths of the leaves. In the two related species an elongated triangular portion of the summit of the sheath opposite the insertion of the leaf is thin and membranous, while in *S. Georgianus* this portion is represented by only a narrow horizontal brownish band, as shown in the accompanying plate.

*Scirpus Georgianus* is further distinguished from *S. atrovirens* by its more numerous glomerules of fewer spikelets, and from *S. polyphyllus* by its fewer and broader leaves.

Collected in muddy alluvial soil on the bank of the Middle Oconee River, Clarke Co., May 23, 1897. Accompanied by *Ranunculus recurvatus* and *Thalictrum polygamum*. One specimen has been placed in the herbarium of the New York Botanical Garden.

**Explanation of Plate 22**

1. Portion of plant,  $\times \frac{3}{8}$ .
2. Single spikelet,  $\times 10$ .
3. A scale,  $\times 20$ .
4. Achene and style,  $\times 20$ .

Of the genus *Tradescantia*, as revised by Dr. J. K. Small,\* I have collected the three following species in Clarke Co.:

*T. REFLEXA* Raf. New Fl. N. A. 2 : 87. 1836

In dry woods, Athens, flowering in May. This seems to be one of its easternmost known stations.

*T. HIRSUTICAULIS* Small, *l. c.*, 233

Dr. Small cites three stations for this species, and I can now add a fourth and northernmost, viz : Athens, where I collected it in dry fields near the Oconee River in 1895, 1896 and 1897. It flowers there in April. About half of the specimens observed have pink-purple petals, while the rest have bright blue ones like most other species of the genus. There seem to be none with intermediate colors, and the two forms make a pleasing contrast when growing side by side.

*T. MONTANA* Shuttl.; Britton, Ill. Fl. 1 : 377. 1896

In rich woods, Athens, flowering in May. Altitude about 650 ft. This station is farther south and at a lower altitude than any previously known.

*JUNCOIDES PILOSUM* (L.) Kuntze, Rev. Gen. Pl. 725. 1891

In rich shady woods, Athens ; with *J. campestre*, and flowering at the same time (March and April). Altitude about 650 ft.

*UVULARIA SESSILIFOLIA* L. Sp. Pl. 305. 1753

Alluvial soil on banks of Middle Oconee River, between Tallasee Shoals and Princeton. Altitudes 600-650 ft. This is near its southern limit.

*UVULARIA PUBERULA* Mx. Fl. Bor. Am. 1 : 199. 1803

In rich woods in Athens and near Bobbin Mill Creek, altitudes 610-650 ft. This species has not been reported from so far south by recent authors, but Elliott (Bot. S. C. & Ga. 1 : 391) describes a *Uvularia* "from specimens sent \* \* \* from Athens, by Mr. Green," and asks "Do they belong to this species?" His uncertainty is probably due to immature material. The description applies very well to the flowering state of *U. puberula*, and as I have collected this species in fruit also, with leaves fully expanded,

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\* Bull. Torr. Club, 24 : 228-236, May 29, 1897.

probably in the identical locality from which Mr. Green secured his specimens, there can no longer be any doubt as to the identity of Elliott's plant.

*SISYRINCHIUM CAROLINIANUM* Bicknell, Bull. Torr. Club, 26 : 221.

My. 1899

Common in dry soil, Clarke Co. My specimens, collected near the Middle Oconee River, April, 1897, have been identified by Mr. Bicknell.

*CYPRIPEDIUM PARVIFLORUM* Sal. Trans. Linn. Soc. 1 : 77. 1791

Collected in dry woods near Middle Oconee River at Tallasee Shoals, May 4-7, 1897. Altitude about 725 feet. This seems to be about 100 miles farther south than any previously known station for this species.

*TIPULARIA UNIFLORA* (Muhl.) B.S.P. Prel. Cat. N. Y. 51. 1888

I have found the evergreen winter leaves and dead flowering stems of this rare and curious orchid in rich woods at four or five stations in Athens.

*CASTANEA DENTATA* (Marsh) Borkh. Handb. Forstb. 1 : 741. 1800

In rich woods, Athens, altitude 650 ft. Trees rather few and small, and fruiting sparingly. Is the southern limit of this species moving northward? Bartram (Travels, p. 36) mentions "*Fagus castanea*" as one of the trees observed in the vicinity of Wrightsborough, Ga. (now in McDuffie Co.), in 1773, and Chapman (Fl. S. States, ed. 1, 424. 1860) gives its range as "West Florida and northward" (perhaps an error), but it is now generally supposed to be confined to the mountains and northern states.

*PYRULARIA PUBERA* Mx. Fl. Bor. Am. 2 : 233. 1803

About 15 or 20 individuals in an area of a few square rods in rich shady woods, Athens. Altitude 650 ft. This is near the southern limit of this species. It flowers in April, but formed no fruit in the two seasons in which I observed it, and seems likely to become extinct in this locality. The flowers although apparently perfect all fall off a few days after expanding.

*CHENOPODIUM BOSCIANUM* Moq. Enum. Chenop. 21. 1840

In October, 1896, I collected this plant in dry open woods on



the University campus in Athens. It does not seem to have been reported from Georgia before.

BOERHAAVIA ERECTA L. Sp. Pl. 3. 1753

In cultivated ground on the University campus, Athens, in flower October, 1896. This is one of its northernmost stations.

ALSINE PUBERA (Mx.) Britton, Mem. Torr. Club, 4 : 107. 1893

Rich shady woods, Athens. Altitude about 650 ft. Flowering from March to May. Southern limit?

CERASTIUM BRACHYPODUM (Engelm.) Robinson; Britton, Mem. Torr. Club, 5 : 150. 1894

Collected on dry rocks near Oconee River, Athens, March 15, 1897, with *Myosotis verna* and *Valerianella radiata*. New to the southeastern states.

CIMICIFUGA RACEMOSA (L.) Nutt. Gen. 2 : 15. 1818

Found in May, 1897, with flowers unopened, in rich woods on the southwest side of the Middle Oconee River at Tallasee Shoals and Princeton. Southern limit.

ARABIS CANADENSIS L. Sp. Pl. 665. 1753

In dry rocky woods near Oconee River, Athens, and Jack's Creek, Morgan Co. The latter station seems to be the southernmost known.

DIAMORPHA PUSILLA Nutt. Gen. 1 : 293. 1818

On flat exposed granite rock, Athens, with *Arenaria brevifolia*. This little plant seems to have a very brief period of activity. On April 20, 1897, the plants were in full bloom, covering the rock with a mass of red stems and leaves and pinkish flowers; but when the locality was visited on May 15th all the leaves and petals had fallen, and the now fruiting plants were dried up and scarcely visible.

HEUCHERA RUGELII Shuttl.; Kunze, Linnaea, 20 : 43. 1847

A few specimens of this plant grow in crevices on the north face of the granite cliff mentioned above as the habitat of *Polypodium vulgare*. I have found it in flower from September to November in 1896. This seems to be its southernmost known station, and the first in Georgia.

*PARNASSIA ASARIFOLIA* Vent. Jard. Malm. *pl.* 39. 1803

In wet woods, at one locality in Athens. Altitude 625 ft. Previously known only from the higher mountains. In October, 1896, when I collected my specimens, the plant began to flower about the middle of the month, which is about six weeks later than it does in North Carolina, according to specimens from that state.

*CRATAEGUS BOYNTONI* Beadle, Bot. Gaz. 28: 409. Jan. 10, 1900

In dry woods, Clarke Co., where it is one of the commonest species of the genus. My specimens, which were collected in Athens, April, 1897, have been determined by Dr. Britton.

*WALDSTEINIA PARVIFLORA* Small, Bull. Torr. Club, 25: 137.  
1898

In rich woods near Tanyard Branch and Bobbin Mill Creek, Clarke Co. Altitude about 600 ft. Flowering March-May. These stations are farther south and at a lower altitude than any cited by Dr. Small in his description.

*ALCHEMILLA ARVENSIS* (L.) Scop. Fl. Carn, ed. 2, 1: 115. 1770

In April, 1897, I found a small patch of this diminutive weed in a pasture in Athens, which makes the first known station for it in Georgia, and the southermost in this country.

*ROSA BRACTEATA* Wendl. Bot. Beobacht. 50. 1798

Common along fences and roadsides in Athens, flowering from June to October.

*MEDICAGO ARABICA* (L.) All. Fl. Ped. 1: 315. 1785

In fields and along roadsides, Clarke Co. This species does not seem to have been reported as naturalized in the southeastern states before.

*ROBINIA PSEUDACACIA* L. Sp. Pl. 722. 1753

Collected in rich woods near the Middle Oconee River in Jackson Co., May 6, 1897, in flower. Altitude 700 ft. My specimens, which I refer with some hesitation to this species, were slender shrubs about 2 m. tall, with odorless flowers.

STYLOSANTHES RIPARIA Kearney, Bull. Torr. Club, **24** : 565.

Dec., 1897

In dry woods, Athens. My specimens were collected on the University campus, at an altitude of about 725 ft., May 27, 1897.

VICIA HUGERI Small, Bull. Torr. Club, **24** : 490. Nov., 1897

In dry, woods, Clarke Co. I first collected the plant in Athens in April, 1895. This is farther east than any station cited by Dr. Small.

OXALIS RECURVA Ell. Bot. S. C. & Ga. **1** : 526. 1821 ; Small,  
Bull. Torr. Club, **21** : 471-474. *pl.* 422. 1894

I can add another to the increasing list of stations for this long misunderstood species, viz: Athens, where I collected it in a dry field near the Oconee River, April 24, 1897. My specimens have been identified by Dr. Small.

CROTON CAPITATUS Mx. Fl. Bor. Am. **2** : 214. 1803

Collected in a railroad cut, Athens, Sept. 20 and Oct. 31, 1896. This seems to be one of the easternmost points reached by this woolly western plant in its travels.

ACER LEUCODERME Small, Bull. Torr. Club, **22** : 367. 1895

Common in rich shady woods, on the north side of hills, in Clarke Co., flowering in April. Identified by Dr. Small.

VIOLA CUCULLATA Ait. Hort. Kew. **3** : 288. 1789. Britton &  
Brown, Ill. Fl. **3** : 520. *f.* 2487b. 1898

The true *V. cucullata* as now understood, is represented from the southern states in the Columbia University Herbarium by a single specimen from Knoxville, Tenn., and I can find no record of its having been collected farther south. I collected it, however, in a small bog in Athens at an altitude of about 625 ft. in 1896 and 1897, and I also observed what appeared to be the same thing in a springy place near Tallasee Shoals on the Middle Oconee River, at an altitude of 650 ft., May 5, 1897. It begins to flower about the first of April.

VIOLA MULTICAULIS (T. & G.) Britton, Mem. Torr. Club, **5** : 227.  
1894

In dry woods, on the north side of the valley of Sandy

Creek, Clarke Co. Altitude about 625 ft. This is one of the easternmost stations for this species, and seems to be also the northernmost known, with the exception of the type locality in Kentucky.

VIOLA HASTATA Mx. Fl. Bor. Am. 2: 149. 1803

Until within a few years Athens was the only known station in Georgia for this rare species. I have found it in one locality in the city, in low rich woods, at an altitude of about 600 feet, which is probably the lowest altitude at which it has been collected. I secured two flowering specimens in March and April, 1897, at which time there were perhaps a dozen individuals in all.

VIOLA TRIPARTITA Ell. Bot. S. C. & Ga. 1: 302. 1817; Small, Bull. Torr. Club, 24: 497, Nov., 1897

*V. hastata* var. *tripartita* Gray, Bot. Gaz. 11: 291. 1886.

Elliott (*l. c.*) describes this species, as also the preceding, "from specimens collected near Athens, Georgia, by Mr. Green." I have found it quite abundant in rich woods in several parts of the city. This species was long considered a variety or "aberrant form" of *V. hastata*, but it could never have been so considered by any one who was familiar with the two species in the field; and Dr. Small has recently pointed out some of the many differences between them. I had opportunity to compare the two species in the living state in the spring of 1897, and was impressed with their total dissimilarity. There is, however, a form which in the herbarium appears on superficial examination to be somewhat intermediate between the two, but its affinities are clearly with *tripartita*. This form is **Viola tripartita glaberrima** (*V. hastata* var. *glaberrima* Ging.; DC. Prodr. 1: 300. 1824; Chapm. Fl. S. States, ed. 3, 34. 1897). It differs from typical *tripartita* in having leaves all undivided and glabrous, but is in other respects very similar. It seems to extend farther south than the type, and is the plant which was taken for *V. hastata* in Florida. I have collected it in rich woods near the Middle Oconee river, about two miles southeast of Athens, in 1896 and 1897. Like *V. tripartita*, with which it is perhaps connected by intermediate forms, its leaves are conspicuously plicate, a character which distinguishes it at once from *V. hastata* in the field, but is not evident in herbarium specimens.

*ELAEAGNUS HORTENSIS* Bieb. Fl. Taur. Cauc. **1** : 112. 1808

Common in dry woods in the southern part of Athens, appearing perfectly at home. Flowering in April. This plant has evidently been long established, and I have been unable to trace its origin. It does not seem to be cultivated in the vicinity at the present time.

*HARTMANNA SPECIOSA* (Nutt.) Small, Bull. Torr. Club, **23** : 181. 1896

In May, 1896, I found a colony of this western species flourishing and blossoming by the roadside between Florence and Bostwick, Morgan Co., and in other similar localities a little later. It does not seem to have been reported from middle Georgia before.

*PANAX QUINQUEFOLIUM* L. Sp. Pl. 1050. 1753

A few plants in rich shady woods near Bobbin Mill Creek, Clarke Co. Altitude 610 feet. This seems to be the southernmost known station for this species in North America.

*SCANDIX PECTEN-VENERIS* L. Sp. Pl. 256. 1753

One specimen found on the University campus, Athens, with nearly mature fruit, April 25, 1896. The locality was obliterated the following winter, and I did not see the plant again.

*DAUCUS PUSILLUS* Mx. Fl. Bor. Am. **1** : 164. 1803

In dry fields, Athens, at altitudes from 600–700 feet. This is one of the northernmost stations known for this species.

*LEUCOTHOE CATESBAEI* (Walt.) Gray, Man. ed. 2, 252. 1856

On shaded banks of both rivers, Clarke Co. Altitudes 580–675 ft. This is probably near the southern limit of this Alleghanian species.

*GALAX APHYLLA* L. Sp. Pl. 200. 1753

In rocky woods on both banks of the Middle Oconee River, Clarke Co., rare. Altitudes 600–675 ft. In flower May 28, 1897. This is its southern limit, so far as known.

*LYSIMACHIA NUMMULARIA* L. Sp. Pl. 148. 1753

This species does not seem to have been reported from the Southern States. It is very abundant in open meadows along

Tanyard Branch in Athens, but rarely flowers. I found only two flowering specimens in 1896 and three in 1897. Though it is not a native, I have never seen it in cultivation in Georgia, and cannot satisfactorily account for its occurrence in Athens.

MOHRODENDRON CAROLINUM (L.) Britton, Gard. & For. 6: 463.  
1893

I have noticed one peculiarity of this species which does not seem to have ever been recorded. Its corollas are open wide some weeks before anthesis, while still green and not half grown. I suspect that the same may be true of the other species of the genus and of the related genus *Styrax*, but I have never had opportunity to observe the aestivation of the latter.

CUSCUTA COMPACTA Juss.; Choisy, Mem. Soc. Gen. 9: 281. *pl.* 4.  
*f.* 2. 1841

On shrubs near Oconee River, Athens. This is one of the easternmost stations for this species, and seems to be the first reported in Georgia.

GILIA RUBRA (L.) Heller, Contr. Herb. F. & M. Coll. 1: 81.  
1895

In dry rocky field near Oconee River, Athens, altitude 600 ft. I can find no record of a more northern station for this species.

***Scutellaria multiglandulosa* (Kearney) Small**

*S. integrifolia multiglandulosa* Kearney, Bull. Torr. Club, 21: 482. 1894.

This seems to be the same plant which is described by Dr. Chapman in the first edition of his Southern Flora (1860) as *S. integrifolia* L. and in the third edition (1897) referred to *S. brevifolia* Gray, with a mark of doubt. A comparison of one of my specimens with type material of *S. brevifolia* from Texas (Hall's no. 458) shows the two to be clearly distinct, however. Collected in a dry field in Athens, near the river, in 1895, 1896 and 1897. Altitude 600 ft. Previously known only from south Georgia and Florida. This plant, which Dr. Small now separates as a distinct species, bears little resemblance to *S. integrifolia*, of which it was published as a variety. In all the specimens I have collected the

corollas are invariably white, a character which has not been noted before. It flowers in Athens in May and June.

*BLEPHILIA CILIATA* (L.) Raf.; Benth. Lab. 319. 1833

In dry woods, Athens, flowering in May and June. This is near its southern limit.

*THALESIA UNIFLORA* (L.) Britton, Mem. Torr. Club, 5: 298. 1894

In rich woods, Athens; rare. This species does not seem to have been recently reported from the Southern States, and I have seen no southeastern specimens besides my own.

*PAULOWNIA TOMENTOSA* (Thunb.) Baill. Hist. Pl. 9: 434. 1888

This tree is becoming naturalized in Georgia. In Athens it has escaped to the woods in several places, and seems very much at home.

*GALIUM UNIFLORUM* Mx. Fl. Bor. Am. 1: 179. 1803

Collected in dry woods on west bank of Middle Oconee River, opposite Princeton, May 28, 1897. Altitude 600 ft. This is its northernmost station, as far as I know.

*VIBURNUM ACERIFOLIUM* L. Sp. Pl. 268. 1753

In rich woods, Clarke and Morgan Cos. This species is not definitely known from farther south.

*VIBURNUM RUFOTOMENTOSUM* Small, Bull. Torr. Club, 23: 410.  
1896

In dry woods, Clarke Co.; not rare.

*LONICERA JAPONICA* Thunb. Fl. Jap. 89. 1784

Dr. Small has noted the naturalization of this species in the Southern States. It is quite common about Athens, growing along roadsides or often in moist woods and along streams, and thriving as well as any native plant. It flowers from May to November, and fruits freely.

*CAMPANULA DIVARICATA* Mx. Fl. Bor. Am. 1: 109. 1803

On rocks near Bobbin Mill Creek, Clarke Co., flowering in September. Altitude 620 ft. This is another Alleghanian plant which extends well down into the foothills.

EUPATORIUM COMPOSITIFOLIUM Walt. Fl. Car. 199. 1788

*E. coronopifolium* Willd. Sp. Pl.

In dry fields, Athens, flowering late in October. This is one of its highest and northernmost stations known.

SOLIDAGO BRACHYPHYLLA Chapm.; T. & G. Fl. N. A. 2 : 218.  
1841

In dry oak woods, Athens, altitude 675 ft. Probably its northern limit.

PLUCHEA PETIOLATA Cass. Dict. Sci. Nat. 42 : 2. 1826 ; Kearney,  
Bull. Torr. Club, 21 : 265. 1894

Mr. Kearney (l. c.) has pointed out the difference between this species and *P. camphorata* of the coast. It does not seem to have been reported from Georgia however. I found it in September, 1896, in wet woods in the southern part of Athens.

FILAGO NIVEA Small, Bull. Torr. Club, 24 : 333. July, 1897

*Evax multicaulis* DC. Prodr. 5 : 459. 1836.

Dr. Small has noted the occurrence of this western plant in the vicinity of Stone Mountain. In May, 1896, I found it in a field near Bostwick, in Morgan Co., and a year later in Athens, which is about 50 miles farther east than Stone Mountain.

COREOPSIS GRANDIFLORA Hogg ; Sweet, Brit. Fl. Gard. 2 : pl. 175.  
1825-7

In dry fields, Athens. This is its eastern limit, as far as known.

SENECIO SMALLII Britton, Mem. Torr. Club, 4 : 132. 1893

Common in dry fields, Clarke, Oconee and Walton Cos.

ACANTHOSPERMUM AUSTRALE (L.) Kuntze, Rev. Gen. Pl. 303. 1891

According to Dr. Chapman, who examined one of my specimens, this tropical weed was first introduced in wool at the Augusta factories. If so it has not spread northward as much as southward. In the fall of 1896 I collected it along one of the railroads in Athens, which seems to be the northernmost point it has reached.

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